IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

ELEVEN ENGINEERING, INC. and ELEVEN ENGINEERING GAME CONTROL LLC,
 	
                    Plaintiffs,
 	
        v.
 	
NINTENDO CO., LTD., NINTENDO OF AMERICA INC., SONY COMPUTER ENTERTAINMENT AMERICA LLC (f/k/a SONY COMPUTER ENTERTAINMENT AMERICA INC.) and MICROSOFT CORPORATION,
 	
                    Defendants.
	Case No. 1:09-cv-00903-LPS

**PLAINTIFFS ELEVEN ENGINEERING, INC. AND
ELEVEN ENGINEERING GAME CONTROL LLC'S OPENING BRIEF
REGARDING CLAIM CONSTRUCTION OF U.S. PATENT NO. 6,684,062**

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I.   **INTRODUCTION AND RELEVANT BACKGROUND**

Plaintiffs Eleven Engineering, Inc. and Eleven Engineering Game Control LLC ("Eleven") submit this Opening Brief Regarding Claim Construction of U.S. Patent No. 6,684,062 (the "'062 patent", Dkt. 102-6). Eleven has accused Microsoft of willfully infringing claims 1, 4, 6, 7, 8, and 9 of the '062 patent. The accused products include the Xbox 360 and Xbox One game systems and accessories.

The inventors of the '062 patent include current and former employees of Eleven Engineering, Inc. The application for the '062 patent was filed on October 25, 2000 and issued on January 27, 2004. The '062 patent has not been subject to any post-grant proceedings. It is directed to wireless radio frequency game control systems that overcome the limitations of wired and infrared game controllers such as limited mobility and interruption. ('062 Pat., 3:37-18). The claimed inventions utilize, among other things, time domain multiplexing and frequency hopping to ensure that the wireless game system is reliable, fast, and saves power. (*Id.* at 12:44-68).

Here, the parties dispute the construction of five claim terms of the '062 patent. Microsoft contends that each term is indefinite. Notably, however, Microsoft failed to identify four of these five terms as indefinite in its Initial Invalidity Contentions, which were required under Paragraph 8(e) of the Court's Scheduling Order (Dkt. No. 68). As for the remaining term, Microsoft failed to provide any supporting basis for its assertion that the term is indefinite. (Ex. A, Microsoft Invalidity Contentions '062 Pat., p. 57). As such, Microsoft's arguments are untimely and should be rejected. Moreover, even had Microsoft properly disclosed its invalidity arguments in accordance with the Scheduling Order, there is no cogent basis on which Microsoft can meet its clear and convincing burden of proving that the disputed claim terms are indefinite. The meaning of each term, read in light of the specification and the prosecution history, informs, with reasonable certainty, those skilled in the art about the scope of the invention. Eleven has submitted herewith

the Declaration of Dr. Shawn Burke. He is an expert in the relevant field of art of the '062 patent.

He explains in detail why the meaning of each disputed term is reasonably certain to a person of

ordinary skill in the art of the '062 patent.

II.   PROPER CONTRUCTION OF THE DISPUTED TERMS OF THE '062 PATENT[1]

A.   "the controllers [base transceiver][2] can use the synchronous time domain multiplexing to save power by turning off their [its] radio transceivers when they are [it is] not receiving or transmitting data"

Eleven Engineering's Construction	Microsoft's Construction
the controllers [base transceiver] can use a synchronized polling process, specified time slots or similar detection and coordination method with different intervals of time to carry multiple signals on the same RF frequency or channel to lower power consumption of their [its] radio transceivers when they are [it is] not receiving or transmitting data	Indefinite. If not found indefinite, then: the controllers [base transceiver] can use the synchronous time domain multiplexing to save power by turning off their [its] radio transceivers when they are [it is] not receiving or transmitting data, *where "radio transceiver" is construed as Microsoft proposes below.*

Eleven's proposed construction is correct and should be adopted because these claim

phrases are not indefinite to one of ordinary skill in the art. Rather, the plain language of these

claim phrases and '062 Patent specification make clear that synchronized polling, specified time

slots or similar detection and coordination methods are used to save power by lowering power

consumption. Submitted herewith is the declaration of Dr. Shawn Burke, an expert in the field of

radio frequency-based wireless communication who qualifies as a person having ordinary skill in

this art (hereinafter "POSITA"). Dr. Burke explains in detail why these claim phrases are not

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[1] In view of the Court's extensive familiarity with the applicable legal standards, Eleven has not devoted a separate section to reciting those standards. *See*, for example, *Custom Media Techs. LLC* v. *Comcast Cable Communs., LLC*, 2015 U.S. Dist. LEXIS 105025, at *2-7 (D. Del. Aug. 11, 2015) (reciting applicable legal standards). Instead, Eleven cites to any particularly relevant authority while addressing the proper construction of the disputed claim terms.

[2] Eleven will address the first two disputed claim phrases together because the claim construction issues are identical for both phrases, with the only difference in the two phrases being the substitution of "base transceiver" for "controllers."

indefinite to a POSITA, and what is meant by using synchronous time domain multiplexing to save power by turning off the radio transceiver when it is not receiving or transmitting data. (Burke 12/2015 Decl., ¶¶ 27-33).[3]

As an initial note, Microsoft bears the burden of proving by clear and convincing evidence that a claim is indefinite. *See Intel Corp.* v. *VIA Techs., Inc.*, 319 F.3d 1357, 1366 (Fed. Cir. 2003). "[A] patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Nautilus, Inc.* v. *Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2124 (2014). Microsoft only recently contended that this claim phrase is indefinite. Under Paragraph 8(e) of the Court's Scheduling Order (Docket No. 68), Microsoft served Eleven with its Initial Invalidity Contentions on September 1, 2015. In those invalidity contentions, Microsoft did not contend that these claim phrases were indefinite. (Ex. A, Microsoft Invalidity Contentions '062 Pat., pp. 56-57). In other words, Microsoft's initial read of these claim phrases was that they were not indefinite. And to this day, Microsoft has failed to provide any supporting basis or explanation for its contention that these claim phrases are indefinite. Eleven objects to any new articulation by Microsoft as untimely, and reserves the right to rebut any new arguments by Microsoft.

Even now, Microsoft is not entirely convinced that these claim phrases are indefinite because it contends that, if they are not indefinite, the claim phrases should be construed using their exact words and nothing more, provided that its proposed construction of another term is adopted. (*See* Dkt. No. 102-5, p. 1). At a minimum, Microsoft's alternate construction of using the exact words of the claim (*albeit* conditioned upon a flawed construction of another term) to

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[3] The "Burke 12/2015 Decl." refers to the Declaration of Shawn Burke Regarding Construction of Certain Claims of U.S. Patent Nos. 6,346,047 and 6,684,062 that is submitted concurrently with and in support of Eleven's Opening Claim Construction Briefs.

define these terms is a tacit admission that their meaning is reasonably certain to a POSITA.

How a POSITA understands a claim term provides an objective baseline from which claim interpretation begins. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1326 (Fed. Cir. 2005). "Quite apart from the written description and the prosecution history, the claims themselves provide substantial guidance as to the meaning of particular claim terms." *Id.* In this case, two important points stand out based on the words of the claim phrase to a POSITA. (Burke 12/2015 Decl., ¶¶ 29-31). First, they make it clear that it is synchronous time domain multiplexing that is contributing to saving power because that is what the claim phrases expressly convey to a POSITA. (*Id.*, ¶ 30). The specification discloses that synchronous time domain multiplexing involves the use of a synchronized polling process, specified time slots or similar detection and coordination method with different intervals of time to carry multiple signals on the same radio frequency (RF) frequency or channel. (*Id.*) The proper construction of this claim phrase should capture that meaning of synchronous time domain multiplexing.

Second, the saving of power is tied to one component of the controllers and the base transceiver, specifically, the radio transceiver. (*Id.*, ¶ 31). Also, saving of power is tied to a specific condition of the radio transceiver, namely, when it is not transmitting or receiving data. (*Id.*). The '062 Patent specification teaches that saving power is tied to characteristics of the invention of low power consumption. (*Id.*). The '062 Patent also teaches that lower power consumption is one characteristic of the invention and other characteristics include "stringent real time performance" and "low packet transmission latency." (*Id.*, citing '062 Pat., Abstract & 12:44-52). Saving power by turning off the radio transceiver must be construed with the characteristics of low power consumption, which can be achieved while also achieving other characteristics of stringent real time performance and low packet transmission latency. (*Id.*, ¶ 31). Eleven's

proposed construction correctly captures that the goal of saving power by turning off the radio transceiver is to achieve low power consumption. (*Id.*).

Microsoft's construction is incorrect because it does not capture the stated objectives of the invention of low power consumption. Moreover, Microsoft's construction would actually ignore other stated objectives of the invention. By tying its construction of the disputed phrases to its proposed construction of "radio transceiver," which is incorrect for the reasons discussed below, Microsoft is implicitly arguing that a radio transceiver must include all components of one preferred embodiment, and more importantly, every one of those components must be completely powered down. That argument goes against the teachings of the '062 Patent specification, which discloses that power consumption is *lowered*, not eliminated. (*Id.*, ¶ 31). It also goes against the wording of the claim which says that power is *saved*, not eliminated. (Id.).

Further, adopting Microsoft's construction that the component has to be completely shut off goes against the other characteristics of the invention of stringent real time performance and low packet transmission latency if the radio transceiver had to be completely shut off each time it was not either transmitting or receiving data. (*Id.*). For these reasons, Microsoft's construction, which depends on an improper construction of radio transceiver and ignores the stated characteristics of the invention, is improper.

B.   "radio transceiver"

Eleven Engineering's Construction	Microsoft's Construction
circuitry for transmitting or receiving radio frequency signals	Indefinite. If not found indefinite, then: RF module that receives and transmits RF signals, containing a central microprocessor, a modulator, a demodulator, an oscillator, an amplifier, an RF switch, a bandpass filter, an antenna, a post detection filter, a data slicer circuit, and a received signal strength indicator (as shown in Fig. 10)

Eleven's proposed construction is correct and should be adopted because a POSITA would

understand that a "radio transceiver" means "circuitry for transmitting or receiving radio frequency signals" based on the use of the words, "radio transceiver" and the '062 Patent specification. (*See* Burke 12/2015 Decl., ¶¶ 34-40). Microsoft cannot meet its substantial burden of showing the meaning of this term is not reasonably certain to a POSITA. Indeed, the testimony of Dr. Burke, based on the wording of the term and the '062 Patent specification, shows that the term is not indefinite. (*Id.*). As with prior disputed claim terms, Microsoft's shifting position on this issue calls into question the merits of its contention. In particular, Microsoft did not identify this claim term as being indefinite in its Initial Invalidity Contentions, nor has it ever provided any supporting basis or explanation why this claim term is indefinite. (Ex. A, pp. 56-57). And, Microsoft itself is not convinced that the claim term is indefinite because it alternatively argues that the term is reasonably certain if all the components of a preferred embodiment, as well as some extraneous components, are included within the definition of the claim term.

The plain language of the last two claim limitations of claim 1 disclose that a radio transceiver is a device that can transmit or receive data because those limitations expressly recite that capability. (Burke 12/2015 Decl. ¶ 37, citing '062 Pat., 14:30-36). The use of the word "radio" combined with the use of the acronym "RF," both in the claim and specification, make clear to a POSITA that what is being transmitted or received are radio frequency signals. (*Id.*, ¶ 38). Finally, the '062 Patent specification makes clear to a POSITA that a radio transceiver consists of circuitry that can transmit or receive the radio frequency signals. (*Id.*, ¶ 39). Therefore, this term's meaning is reasonably certain to a POSITA and is not indefinite. (*Id.*, ¶ 35).

Microsoft's alternative proposed construction improperly introduces limitations from a preferred embodiment into the claims. *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004) ("[e]ven when the specification describes only a single embodiment, the claims

of the patent will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using words of expressions of manifest exclusion or restriction."). It is "not enough that the only embodiments, or all of the embodiments, contain a particular limitation. We do not read limitations from the specification into claims; we do not redefine words. Only the patentee can do that. To constitute disclaimer, there must be a clear and unmistakable disclaimer." *Thorner v. Sony Computer Entm't Am. LLC*, 669 F.3d 1362, 1366-67 (Fed. Cir. 2012).

None of Microsoft's citations to the intrinsic record show a clear and unmistakable disclaimer or warrant limiting this claim term to the exact circuitry shown in Figure 10. To the contrary, the '062 Patent specification expressly states that Figure 10 "illustrates a ***representative*** radio frequency system design," and there is nothing in the intrinsic record that constitutes a clear and unmistakable disclaimer that all of the exemplary componentry of Figure 10 must be included in the claimed radio transceiver. ('062 Pat., Fig. 10 & 3:22-23). This point is reinforced by the fact that some of the components Microsoft attempts to read into the claim term are not even part of a radio transceiver. For example, Microsoft contends that a radio transceiver must be defined to include a received signal strength indicator even though that component is clearly not part of the radio transceiver. (Burke 12/2015 Decl., ¶ 40). The received signal strength indicator is a component that can detect signal strength; the radio transceiver is the component that transmits or receives signals. (*Id.*, ¶¶ 34, 40). Microsoft's insistence on including unnecessary componentry is further proof that its proposed construction is incorrect.

C.   "base transceiver"

Eleven Engineering's Construction	Microsoft's Construction
communication translation device	Indefinite

The term "base transceiver" is not indefinite and should be construed to mean a "communication translation device." That is the definition of base transceiver set forth in the '062

Patent specification, and that definition is clear to a POSITA. (Burke 12/2015 Decl., ¶¶ 41-44); *see also Phillips*, 415 F.3d 1315 (noting that the specification "is the single best guide to the meaning of a disputed term" and is usually "dispositive.") (citation omitted).

As with the prior disputed claim terms, Microsoft did not identify the term "base transceiver" itself as being indefinite in its Initial Invalidity Contentions." (Ex. A, pp. 56-57). Microsoft cannot meet its clear and convincing burden of proof where the '062 Patent specification expressly discloses that a base transceiver comprises a communication translation device, and that definition is clear to a POSITA. (Burke 12/2015 Decl., ¶¶ 43-44). The '062 Patent specification further discloses that a base transceiver has two subsystems and clearly explains what each of those subsystems do. (*Id*., ¶ 43). Thus, the term "base transceiver" is not indefinite and should be defined precisely how it is in the specification -- a communication translation device. (*Id*., ¶¶ 43-44).

D.   "achieving a small system latency with a small standard deviation and therefore minimizing the user's perceived control lag"

Eleven Engineering's Construction	Microsoft's Construction
achieving consistently small system delay that enables real time wireless video game performance	Indefinite

1.   The Disputed Claim Terms Should Be Construed Together

The first dispute among the parties is whether "small system latency," "a small standard deviation," and "minimizing the user's perceived control lag" should be construed together or separately. Eleven believes that they must be considered together because the terms appear in the same claim phrase and, thus, construing them together considers the context in which the terms appear in the claim. *Phillips*, 415 F.3d at 1314 ("[T]he context of the surrounding words of the claim also must be considered in determining the ordinary and customary meaning of those terms."); *IGT v. Bally Gaming Intern., Inc.*, 659 F.3d 1109, 1117 (Fed. Cir. 2011) ("We caution that claim language must be construed in the context of the claim in which it appears. Extracting

a single word from a claim divorced from the surrounding limitations can lead construction astray."). The Court should construe the terms in the context in which they appear in the claim – i.e., together -- and not in isolation as requested by Microsoft.

> **2.   The Claim Phrase Is Non-Limiting and Does Not Need To Be Construed**

In the context of claim 1, the phrase "thereby achieving a small system latency with a small standard deviation and therefore minimizing the user's perceived control lag" is non-limiting and requires no construction. It is akin to a "whereby" clause that "merely states the result of the limitations in the claim" and "adds nothing to the patentability or substance of the claim." *Tex. Instruments Inc. v. U.S. Int'l Trade Comm'n*, 988 F.2d 1165, 1172 (Fed. Cir. 1993); *see also Minton v. NASD, Inc.*, 336 F.3d 1373, 1381 (Fed. Cir. 2003) (holding that the phrase "traded efficiently" is merely a non-limiting, laudatory phrase characterizing the intended result of a process step); *Del. Display Grp. LLC v. Lenovo Grp. Ltd.*, 2015 U.S. Dist. LEXIS 150713, at *9-11 (D. Del. Nov. 6, 2015) (Andrews, J.) (finding "pass through a liquid crystal display with low loss" non-limiting).

The disputed phrase describes the ***result*** of employing the wireless communications protocol described in the claim, which includes frequency hopping and synchronous time domain multiplexing. ('062 Pat., Claim 1; Burke 12/2015 Decl., ¶ 45). The specification likewise makes it clear that small system latency and small standard deviation (*i.e*., reliability) are mere objectives of the claimed wireless communication protocol. For example, the Abstract describes the invention as "a wireless system . . . which implements a variety of techniques ***to achieve significant advantages in the areas of latency, reliability***, power consumption, and cross platform compatibility." ('062 Pat., Abstract (emphasis added)). And, the specification further explains that "[t]he RF protocol should . . . minimize signaling latency." (*Id.* at 7:50-57). Further, nothing in the file history suggests that the addition of the "thereby" clause "adds [anything] to the

patentability" of claim 1. *Del. Display Grp.*, 2015 U.S. Dist. LEXIS 150713, at *9 (quoting *Tex.*

Instruments Inc., 988 F.2d at 1172). Rather, the disputed phrase was added during prosecution as

part of a larger group of claim elements reciting clear structural limitations. (Compare originally-

filed claims at Dkt. 102-7, EE001652, to April 14, 2003 Supp. Amendment, EE001732-33).

For these reasons, the claim phrase is non-limiting because it merely recites the results of

the prior-recited claim elements, and need not be construed.

3. The Disputed Claim Phrase Is Not Indefinite

Even if the claim phrase was limiting, it is not indefinite. To begin, Microsoft utterly failed

to provide any supporting basis in its invalidity contentions for its assertion that this claim phrase

is indefinite. (Ex A, Invalidity Contentions, '062 Pat., p. 57). Microsoft's conclusory contentions

are hardly sufficient to meet its clear and convincing burden under *Nautilus*. The claim phrase is

not indefinite because one of ordinary skill in the art understands that "achieving a small system

latency with a small standard deviation and therefore minimizing the user's perceived control lag,"

means "achieving consistently small system delay that enables real time wireless video game

performance." (Burke 12/2105 Decl., ¶ 45).   This construction is consistent with the term's plain

meaning and squarely captures the purpose of the invention. *Phillips*, 415 F.3d at 1314.

The environment of the invention must be considered in determining the level of

preciseness required. *See, e.g., Power-One v. Artesyn Techs., Inc.*, 599 F.3d 1343, 1348 (Fed. Cir.

2010) (finding "near" and "adapted to" not indefinite where the environment of the invention

dictates the necessary preciseness of the terms). Here, the environment is a wireless system for

video game control, and the '062 Patent makes clear that, in this environment, latency means delay,

standard deviation means consistency or reliability, and the objective is enabling real time wireless

video game performance.

The specification sets forth that a purpose of the wireless system is to enable real time

performance during video game play. ('062 Pat., 12:44-49 (identifying "low packet transmission latency with stringent real time performance" as a characteristic of the invention). To achieve real time video performance in a video game system, the system latency (or system delay) must be consistently small enough such that the user of the game system will not be able to perceive any delay during game play, and these characteristics are attributes of the wireless communication resulting from use of the claimed protocol. (Burke 12/2015 Decl., ¶¶ 46-48).

In the '062 Patent, frequency hopping is utilized to avoid "bad channels" suffering from interference, obstacle attenuation, multipath nulls, or any combination of these problems, implemented as part of a synchronous time domain multiplexed wireless radio frequency communications protocol. (*Id.* at ¶ 46). The packets that are transmitted from the controller to the electronic game device contain data for game play, such as data representing the user's depression of a controller key. (*Id.*) If the base transceiver cannot decode or receive these packets because of the aforementioned degrading factors (interference, obstacle attenuation, or multipath nulls, for example), then the game user's action cannot be passed to the electronic game device to effect game play because that data would be lost. (*Id.*) The damaged or lost packet would have to be retransmitted in order to ensure that the user's controller inputs are passed to the game device. (*Id.* at ¶¶ 46-47). One of skill in the art understands that retransmissions *increase* system latency by increasing the time between a user's action and that action being correctly received and decoded for the electronic game device and its ensuing game play. (*Id.*) The invention of the '062 patent, however, avoids the need to retransmit packets through frequency hopping and time domain multiplexing, and therefore leads to small system delay that allows real time wireless video game performance. (*Id.*)

Claim 1 also discloses continuously adjusting the frequency hopping channel palette to

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avoid "bad" channels based upon channel characteristics such as signal strength and number of

damaged packets. ('062 Pat., Claim 1). A person of skill in the art understands that interference,

obstacle attenuation, and multipath are dynamic phenomena that can change over time. (Burke

12/2015 Decl., ¶ 48). By continuously adapting the protocol disclosed in Claim 1, system latency

will not vary in the presence of a changing RF environment, thus providing a system delay that is

consistently small and has a small standard deviation. (*Id.*) Again, that consistency is necessary

to enable real time wireless video game performance. (*Id.*) Accordingly, the '062 Patent makes

clear that what is meant by the disputed claim phrase in the environment of wireless video gaming

is that the invention is achieving consistently small system delay that enables real time wireless

video game performance.

III.   CONCLUSION

For the foregoing reasons, Eleven respectfully requests that the Court adopt Eleven's

proposed constructions in their entirety.

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